

Remarks

This is in response to the Office Action dated September 17, 2009.

The Examiner rejected claims 1-19 of the application under 35 U.S.C. 103 (a) as being unpatentable over Scott (U.S. 6,522,642) in view of Upton (U.S. 6,396,801).

We respectfully submit the rejection is deficient and should be withdrawn for failing to present a *prima facie* case of obviousness.

First we submit the rejection fails to even mention the amendments made to claims 2 and 12 in our response of July 29, 2009. Second, we submit that the examiner has failed to establish a proper basis for why a person skilled in the art would be motivated to combine Scott and Upton. Third, we submit that even if combinable, which we deny, the combination fails to teach the claimed subject matter.

We note that the examiner states on page 7 of the Official Action, under the heading of Response to arguments:

"Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues the "Examiner fails to articulate reasoning with sufficient specificity to support a legal conclusion of obviousness." Examiner respectfully disagrees. The Examiner still contends that a more efficient and increased performance are legitimate and convincing reasons for someone in the art to use circulator. Also, "the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Leapfrog Enter, Inc., v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (quoting *KSR*, 127 S. Ct. at 1739). "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *KSR*, 127 S. Ct. at 1742."

On page 4 of the official action, the Examiner states:

"It would have been obvious to one having ordinary skill in the art at the time the invention was made to add number of circulators in series, such as suggested by Upton, to the system of Scott in order to enable transmission of signal from one port to another and provide much better isolation so the co-channel interference decreases with circulators, thus provide more efficient and increased performance which is increased data output (see Abstract and summary)."

And then further states:

Upton, in Figs. 7-9, teaches number of circulators in series (circulator 222, 228; demodulator 204, 224, 225; FIR filters 208, 212,) for receiving at least part of aggregate signal (from 220) and directs to splitter/summer 224. The splitter/summer 224 splits the signal into a number of channels. The channelized signal are directed to the various tapped delay lines 210 and **reflected back** to the splitter/summer. The reflected signals from the splitter/summer are **reflected back** to the optical circulator 222 as shown in fig. 7 (column 9, lines 48-66; column 10, lines 36-62).

However, our arguments are not rendered moot based on the new ground of rejection, as the alleged new ground of rejection is essentially the previous ground of rejection, just slightly modified to amend the paragraphs set out above. Indeed the examiner even fails to address the amendments made to claim 2 and 12, which we submit demonstrates we are not really dealing with a new ground of rejection, but just a rehashing of previous arguments. And the mere fact that the above referenced paragraph introduces the word **reflected back** does not address the subject matter of amended claim 2 or 12. Indeed, apart from the fact that Upton uses the words reflect, back and demodulator, neither reference teaches any part of claim 2.

Further, the Examiner fails to explain how or why a person skilled in the art would be motivated to combine these references to provide better isolation to reduce co-channel interference, when neither reference addresses the problem of reducing co-channel interference. The examiner has not demonstrated that Upton teaches the use of circulators to provide much better isolation so the co-channel interference decreases and we submit that is not even the reason Upton uses the circulators. Upton uses the circulators, along with the tapped delay lines and a splitter/summer, to produce an arbitrary waveform with time delays introduced to the components. Nowhere does Upton teach or suggest better isolation to decrease co-channel interference. Nor does Scott teach the need to do this.

Further we submit that a person skilled in the art would have no motivation of using Upton's arrangement for splitting a signal and then adding a time delay to each of the multiple components into the antenna diversity arrangement of Scott. And the Examiner has certainly failed to establish such a motivation.

However, we maintain and incorporate by reference our previous arguments as to why the examiner has failed to establish a *prima facie* case of obviousness in general and in particular has failed to establish an appropriate basis for combining these references. And merely quoting Leapfrog and KSR as set out above does not establish such a basis.

In any event, not only does the rejection fail to establish a *prima facie* case of obviousness for failing to provide sufficient basis for combining the references, we submit that, *arguendo*, even if these references can be combined, they fail to teach the claimed subject matter.

First, Upton does not teach circulators in series as alleged by the examiner. Figure 7 illustrates a single circulator in the transceiver, and a single circulator in the receiver. These are not arranged in series as claimed. Further, Figs 7 and 9 illustrate circulators in parallel, as each circulator sends the signal to the photo detector 62, and not to each other. And neither Upton, Scott or a combination actually teaches:

"wherein said circulators, said demodulators, and said duplexer filters, are arranged in series so as to pass each of N number of demodulated

portions of said aggregate signal to a single Radio Frequency (RF) output and each of said demodulated portions being substantially identical to one of said N number of input signals"

as claimed in claim 1, or

wherein each duplexer filter passes its corresponding signal and reflects remaining portions of said aggregate signal and wherein remaining portions of said aggregate signal pass serially through said circulators and said demodulators beginning with a first one of said circulators and ending with a last one of said demodulators.

as claimed in claim 2.

Nor does Upton, Scott or a combination teach the subject matter of the other claims, at least for the reasons given already. Accordingly we submit that even if combinable, which is denied, the combination fails to teach the claimed invention.

Accordingly, we respectfully submit the rejection is deficient and should be withdrawn for failing to present a *prima facie* case of obviousness.

Accordingly, we respectfully submit that the claims are allowable over the cited art, and a notice thereof is hereby requested.

The Commissioner is hereby authorized to charge any additional fees, and credit any over payments to Deposit Account No. 14-1315, in the name of Nortel Networks.

Respectfully submitted,

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